

## IGAD CLIMATE PREDICTION AND APPLICATIONS CENTRE (ICPAC)

### 10 DAY CLIMATOLOGICAL SUMMARY AND IMPACTS FOR THE TENTH DEKAD (1 – 10) OF APRIL 2016 AND CLIMATE OUTLOOK FOR THE TWELVETH DEKAD (21 – 30) APRIL) OF 2016

#### 1.0 Highlights

- Wet conditions were mainly observed over much of the southern sector; western and central parts of the equatorial; as well as central parts of the northern sector of the Greater Horn of Africa (GHA) during the tenth dekad (1-10 April) of 2016;
- Wet conditions are likely to be experienced over western, central and southern parts of the equatorial sector; the central and north eastern parts of the northern sector; as well as the northern parts of the southern sector of Greater Horn of Africa (GHA), during the twelfth dekad (21-30 April) of 2016;
- The observed rainfall conditions during the tenth dekad (1-10 April) of 2016 resulted in improved pasture and foliage, and crop conditions; replenishment of water resources; increase in water related diseases; and localized flooding.

#### 2.0 Introduction

In this bulletin, the climatic conditions observed during the tenth dekad (1-10 April) of 2016 over GHA are reviewed and the associated impacts highlighted. The climate outlook for the twelfth dekad (21-30 April) of 2016 is also provided.

#### 3.0 Observed rainfall situation during the tenth dekad (1–10 April) of 2016

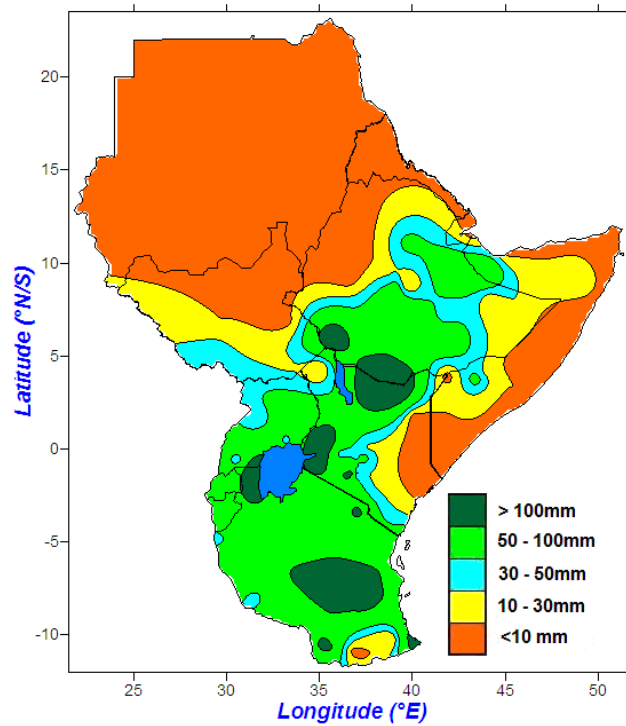
Figure 1 shows the spatial pattern of observed rainfall over the GHA during the tenth dekad (1 – 10 April) of 2016 while Figure 2 shows the rainfall severity index for the same period.

##### 3.1 Northern sector

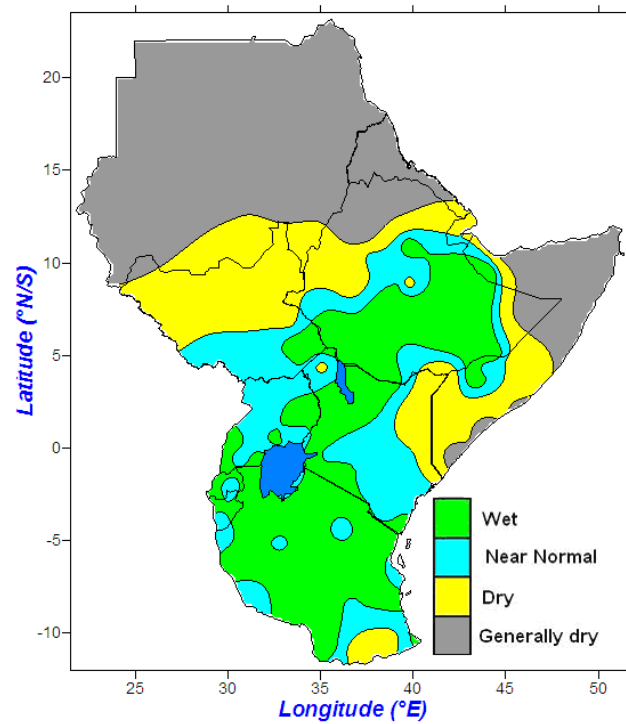
During the tenth dekad (1 –10 April) of 2016 southern and north eastern Ethiopia received between 50mm to more than 100mm of rainfall (Figure 1) which resulted into near normal to wet conditions (Figure 2). The rest of the northern region received less than 30mm of precipitation which resulted to dry or generally dry rainfall conditions.

##### 3.2 Equatorial and Southern sectors

During the tenth dekad (1 –10 April) of 2016, much of the equatorial and southern sector recorded between 30mm to more than 100mm of rainfall (Figure 1), this resulted to near normal to wet rainfall conditions (Figure 2). However eastern parts of Kenya, southern parts of Somalia, and southern parts of Tanzania recorded less than 10 mm of rainfall (Figure 2) which resulted into dry to generally dry rainfall conditions (Figure 2).



**Figure 1: Spatial distribution of observed rainfall during the tenth (1–10 April) of 2016**

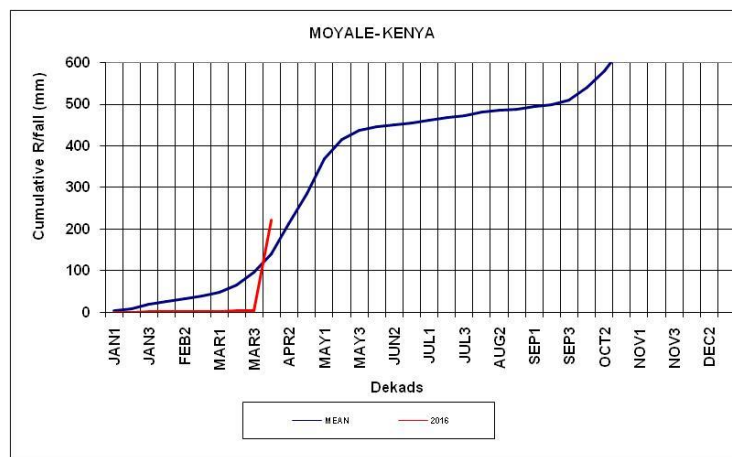


**Figure 2: Rainfall Stress Severity Index for the tenth dekad (1–10 April) of 2016**

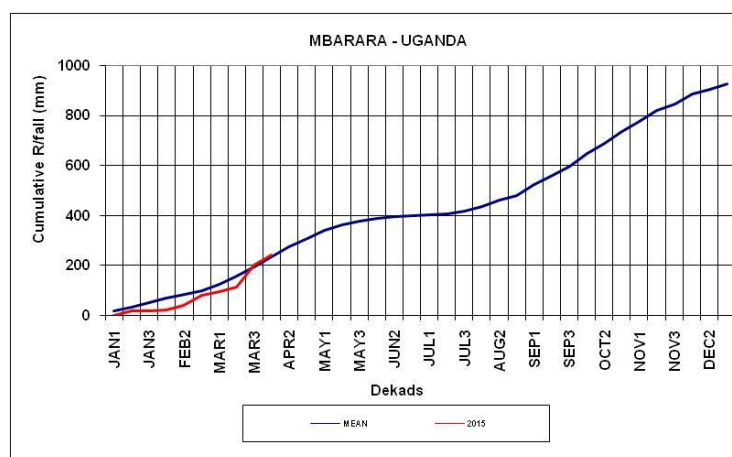
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#### 4.0 Assessment of current rainfall performance

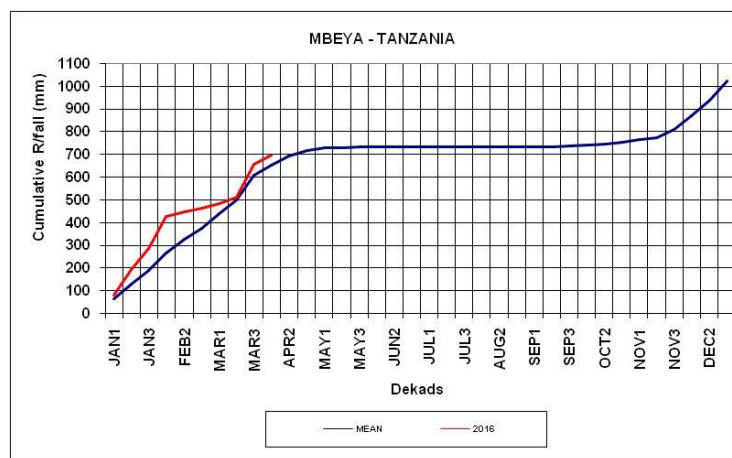
The cumulative dekadal rainfall was used to evaluate the rain water stress over GHA region. Figure 3 shows the cumulative dekadal rainfall performance since January 2015. Near normal to above normal rainfall conditions was observed over north eastern and western parts of the equatorial sector and western parts of the southern sector of the GHA (Figure 3a, 3b and 3c).



**Figure 3a: Cumulative rainfall series for Moyale**



**Figure 3b: Cumulative rainfall series Mbarara**



**Figure 3c: Cumulative rainfall series for Mbeya**

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## 5.0 Impacts on socio-economic sectors

The socio-economic impacts associated with the observed rainfall conditions are highlighted below:

### 5.1 Vegetation condition indicators

The comparison of the Normalized Difference Vegetation Index (NDVI) between the tenth dekad (1-10 April) and the ninth dekad (21-31 March) of 2016 indicate improvement in vegetative conditions mostly around the western and southern parts of South Sudan; extreme south western parts of Ethiopia; south western and eastern parts of Uganda; western and coastal parts of Kenya; and northern and eastern parts of Tanzania. Deteriorated vegetative conditions was observed over southern and southwestern parts of Ethiopia; central parts of Kenya; central and south central parts of Uganda; over much of Rwanda and Burundi; and western and southern parts of Tanzania. The rest of the GHA indicated little or no change in vegetative conditions (Figure 4).

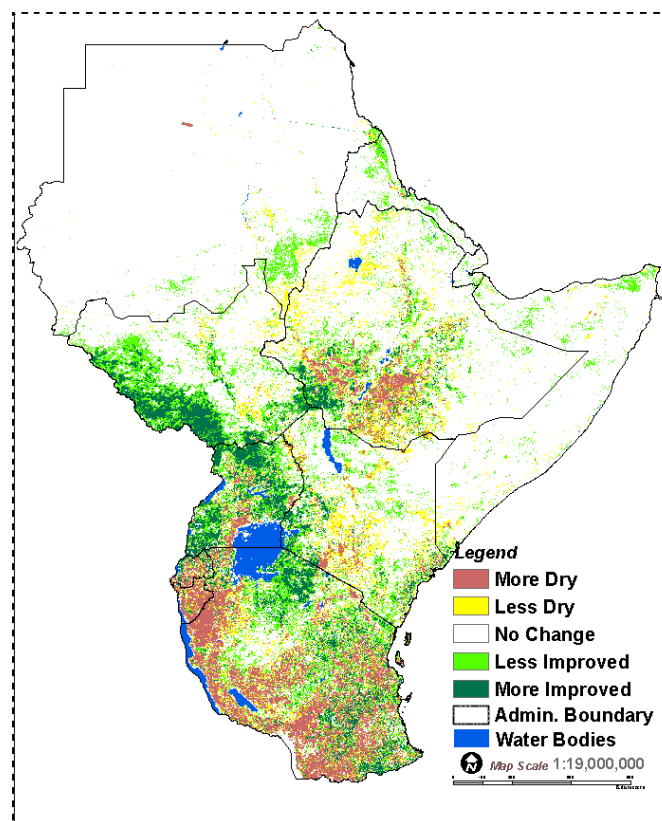


Figure 4: NDVI difference between the tenth dekad (1-10 April) and the ninth dekad (21-31 March) of 2016

### 5.2 Impacts associated with observed climate conditions

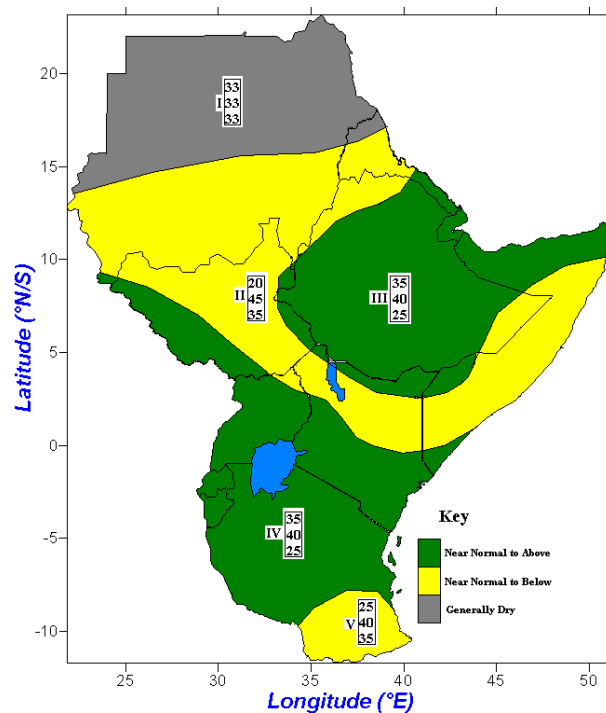
The observed rainfall conditions over GHA during the tenth dekad (1-10 April) of 2016 were associated with the following impacts:

- Improved water availability leading to replenishment of reservoirs and water pans.
- Improved pasture and foliage across parts of the southern sectors of GHA leading to good prospects for livestock performance.
- Increase in water related diseases
- Flooding that led to disruption of livelihoods

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## 6.0 Climate outlook

The rainfall outlook for the twelfth dekad (21-30 April) of 2016 indicates near normal to above normal rainfall conditions are likely to be received in zone III and zone IV (Figure 5) which covers southern parts of Eritrea; northern Somalia; central parts of Ethiopia; north eastern parts of Kenya; western parts of South Sudan; most parts of Uganda, Rwanda and Burundi; western and southern parts of Kenya; and northern and western parts of Tanzania. Near normal to below normal rainfall conditions are likely to be received in zone II and V which covers southern parts of Sudan; western parts of Eritrea; northern and central parts of South Sudan; central parts of Somalia; northern and eastern parts of Kenya; and southern parts of Tanzania (Figure 4). The rest of the GHA region is likely to remain dry (Figure 4).



**Figure 5: Climate outlook for the twelfth dekad (21 – 30 April) of 2016**